

CHAPTER 5

FEDERAL AND STATE ENVIRONMENTAL REQUIREMENTS

This chapter summarizes the major Federal and State of South Carolina requirements that are applicable to the cooling water alternatives for K- and C-Reactors and the D-Area coal-fired powerhouse. Section 5.1 discusses applicable statutes and regulations. Sections 5.2 through 5.8 identify the actions that have been taken to satisfy these requirements. Table 5-1 lists the permits and other environmental approvals needed to implement the cooling water alternatives and the status of each. TC

In addition to securing these permits and complying with applicable standards, the U.S. Department of Energy (DOE) is required to comply with several separate environmental requirements, such as the National Environmental Policy Act (NEPA) and floodplain/wetlands review. DOE has established its own orders and regulations to ensure the environmental, health, and safety protection of its facilities (Section 5.9).

5.1 APPLICABLE STATUTES AND REGULATIONS

National Environmental Policy Act of 1969, as amended (NEPA) (42 U.S.C. 4321 et seq.)

The National Environmental Policy Act of 1969, as amended, requires "all agencies of the Federal Government" to prepare a detailed statement on the environmental effects of proposed "major Federal actions significantly affecting the quality of the human environment." This environmental impact statement has been prepared in accordance with the Council on Environmental Quality Regulations on Implementing the National Environmental Policy Act (40 CFR 1500-1508) and DOE Guidelines for Compliance with the National Environmental Policy Act (45 FR 20694, March 28, 1980), as amended.

Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)

DOE is required to comply with radiation guidance established pursuant to the Atomic Energy Act of 1954, as amended [42 U.S.C. 2201(g)], which authorizes the establishment by rule, regulation, or order standards to protect health or minimize dangers to life or property. In accordance with the Energy Reorganization Act of 1974, DOE defense-related operations are not subject to the regulations of the Nuclear Regulatory Commission. DOE has issued extensive standards and requirements to ensure safe operations.

Executive Order 12088 (October 13, 1978)

This Executive Order requires Federal agencies to comply with applicable administrative and procedural pollution control standards established by, but not limited to, the following Federal laws:

1. Toxic Substances Control Act (15 U.S.C. 2601 et seq.)

Table 5-1. Required Regulatory Permits and Notifications

Activity/facility	Requirement(s)	Agency	Status	
Water				
Cooling water system construction	Construction permits	South Carolina Department of Health and Environmental Control, Industrial and Agricultural Wastewater Division	To be submitted by September 30, 1988, subject to the appropriation of funds by Congress	TC
	Section 404 permit ^a	U.S. Army Corps of Engineers (COE)	To be submitted prior to construction	TC
	Section 401 certification ^b	South Carolina Department of Health and Environmental Control, Division of Water Quality	Requested by COE as part of the dredge and fill permit process	
	Section 10 permit for structures in navigable waters ^a	U.S. Army Corps of Engineers (COE)	To be submitted prior to construction	
	Permit for structures in navigable waters ^a	South Carolina Budget and Control Board	To be submitted prior to construction	
Cooling water discharges	NPDES permit	South Carolina Department of Health and Environmental Control, Industrial and Agricultural Wastewater Division	Issued; modification to permit conditions to be made prior to operation of cooling water system	TE
Compliance with delta 2.8°C temperature requirement ^b	316(a) (thermal impact) study	South Carolina Department of Health and Environmental Control, Industrial and Agricultural Wastewater Division	Plans for conducting studies to be submitted within two months following project completion	
Water withdrawal water use	Quarterly reporting	South Carolina Water Resources Commission	Routine reports will continue to be submitted	

Table 5-1. Required Regulatory Permits and Notifications (continued)

Activity/facility	Requirement(s)	Agency	Status
Endangered species	Consultation/ biological assessment	U.S. Fish and Wildlife Service	Consultations with FWS completed
Fish and Wildlife Coordination Act	Consultation/ consideration of fish and wild- life resources	U.S. Fish and Wildlife Service	Consultations with FWS completed
Migratory Bird Treaty Act	Consultation with FWS	U.S. Fish and Wildlife Service	Consultation with FWS completed
Anadromous Fish Conservation Act	Consultation with FWS	U.S. Fish and Wildlife Service	Consultation with FWS completed
Historic preservation	Archaeological survey and assessment	South Carolina Historic Preservation Officer	Surveys and assess- ments completed; consultation with SHPO completed
Floodplains/wetlands ^c	Assessment and determination	U.S. Department of Energy	Notice published in <u>Federal Register</u> (51 FR 10654) con- currently with Notice of Avail- ability of the draft EIS on March 28, 1986; determination published after completion of FEIS.

a. Applicable to the D-Area coal-fired powerhouse direct discharge alternative.

b. Applicable to once-through cooling-tower alternatives for K- and C-Reactors and the increased pumping alternative for the D-Area coal-fired powerhouse.

c. Refer to Appendix F.

2. Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.)
3. Public Health Service Act, as amended by the Safe Drinking-Water Act [42 U.S.C. 300 (f) et seq.]
4. Clean Air Act (42 U.S.C. 7401 et seq.)
5. Noise Control Act (42 U.S.C. 4901 et seq.)
6. Solid Waste Disposal Act (42 U.S.C. 6901 et seq.), also referred to as the Resource Conservation and Recovery Act

National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.)

No permits, certifications, or approvals related to historic preservation are required; however, DOE must provide the Advisory Council on Historic Preservation an opportunity for comment and consultation, as required by the Historic Preservation Act of 1966 [16 U.S.C. 470(f) et seq.]. Section 106 of this Act requires any agency with jurisdiction over a Federal "undertaking" to provide the Council an opportunity to comment on the effect the activity might have on properties included in, or eligible for nomination to, the National Register of Historic Places.

In addition, Executive Order 11593 (May 13, 1971) requires Federal agencies to locate, inventory, and nominate properties under their jurisdiction or control to the National Register of Historic Places, if those properties qualify. Until this process is complete, the agency must provide the Advisory Council an opportunity to comment on the possible impacts of the proposed activities on the properties.

Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands) (May 24, 1977)

These Executive Orders require that government agencies avoid, to the extent practicable, any short- and long-term adverse impacts on floodplains and wetlands wherever there is a practicable alternative. DOE has issued regulations (10 CFR 1022) to establish DOE compliance procedures for these Executive Orders.

Section 118 of the Clean Air Act, as amended (42 U.S.C. 7420)

Section 118 of the Clean Air Act, as amended, requires that each Federal agency, such as DOE, with jurisdiction over any property or facility that might result in air pollutant discharges, comply with "all Federal, State, interstate, and local requirements" with regard to the control and abatement of air pollution. Authority for regulation of air emissions has been delegated by the U.S. Environmental Protection Agency (EPA) to the South Carolina Department of Health and Environmental Control (SCDHEC), Bureau of Air Quality Control. SCDHEC requires air emission construction permits for construction, alteration, or addition to a source of air emissions. Consequently, an air emission operating permit is required for any new and continuing source of air contaminants. A Prevention of Significant Deterioration (PSD) review is required for any proposed new construction or

any modification of a major source that will result in a significant increase in the emission rate. EPA has promulgated final regulations for airborne radiation limits at DOE facilities (40 CFR 61; 50 FR 5190).

Section 316(a) of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1326)

Section 316(a) of the Federal Water Pollution Control Act, as amended, authorizes EPA's Regional Administrator to set alternative effluent limitations on the thermal component of discharges if the owner/operator (DOE) demonstrates that the proposed thermal effluent limitations are "more stringent than necessary to ensure the protection and propagation of a balanced, indigenous population of fish, shellfish, and wildlife in or on a body of water into which the discharge is to be made." This satisfactory demonstration is to be made to SCDHEC, because it has received the NPDES authority and is the decisionmaker; however program overview is by EPA. The owner/operator must demonstrate, for the cooling water alternative to be implemented, that the critical functions of a particular trophic level are maintained in the water body as they existed before the introduction of heat and that the impact caused by the heated effluent will not result in appreciable harm to the balanced, indigenous community. This is to include scientific evidence that a balanced biological community will be maintained; no adverse impacts to threatened and endangered species will occur; no unique or rare habitats will be destroyed; passage zone for representative, important species will be provided; and receiving-water temperatures outside any (State-established) mixing zone will not exceed the upper temperature limits for survival, growth, and reproduction of any representative, important species occurring in the receiving water.

Section 404 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1344); River and Harbors Act of 1899 (33 U.S.C. 401 et seq.)

The Federal Water Pollution Control Act, as amended, requires all branches of the Federal Government engaged in any activity that might result in a discharge or runoff of pollutants to comply with Federal, State, interstate, and local requirements. The authority to implement these requirements for the discharge of dredged or fill material into the waters of the United States (404 permits) has been given to the U.S. Army Corps of Engineers (COE). SCDHEC has been delegated authority by EPA to regulate wastewater discharges (NPDES permits). Individual (case-by-case) permits issued by COE under Section 404 of the Federal Water Pollution Control Act, as amended, are reviewed by EPA (40 CFR 230). The discharge of dredged and fill material into headwaters of creeks where the natural flow is 0.142 cubic meter per second or less, providing applicable reporting/permitting requirements are met, is covered under a nationwide permit issued by COE.

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The Rivers and Harbors Act of 1899 prohibits dredging, construction, or other work affecting or in navigable waters of the United States, except in compliance with Sections 9 and 10 of the Act. COE is empowered to issue permits specifying acceptable activities in navigable waters (33 CFR 320.4, 321, 322, and 325).

The South Carolina Budget and Control Board has a parallel permitting system with COE (permits for construction in navigable waters, Regulation 19-450),

that is administered by the South Carolina Water Resources Commission (SCWRC). The permit application submitted to COE also serves as the permit application to SCWRC; a separate permit application is not required.

Section 401 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1341)

Section 401 of the Federal Water Pollution Control Act, as amended, requires certification from SCDHEC so discharges of dredged and fill material into navigable waters will comply with applicable effluent limitations and water-quality standards. This certification is a prerequisite for the 404 permit.

South Carolina Pollution Control Act, as amended (Title 48, Chapter 1 of the 1976 Code of Laws of South Carolina)

Under this Act, SCDHEC has authority to require construction permits for the construction of any wastewater treatment facility and any wastewater collection and transmission system. An engineering report and specifications must be submitted to SCDHEC along with a construction permit application. Construction cannot begin until SCDHEC has approved the engineering report and issued a construction permit.

Noise Control Act of 1972, as amended (42 U.S.C. 4901 et seq.)

Section 4 of the Noise Control Act of 1972, as amended, directs all Federal agencies "to the fullest extent within their authority" to carry out programs within their jurisdictions in a manner that furthers a national policy of promoting an environment free from noise that jeopardizes health or welfare.

Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.)

TC | The Endangered Species Act of 1973, as amended, is intended to prevent the further decline of endangered and threatened species and to bring about the restoration of these species and their habitats. The Act is jointly administered by the Departments of Commerce and the Interior, and does not require a permit, certification, license, or other formal approval. Section 7 does, however, require consultation to determine whether endangered and threatened species are known to be present or to have critical habitats on or in the vicinity of the proposed action.

Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661 et seq.)

The Fish and Wildlife Coordination Act, as amended, requires that equal consideration be given to the conservation of fish and wildlife resources during the development of a water-related project. Specifically, the Act requires that consultation be carried out with FWS and appropriate State wildlife agencies with a view to the conservation of wildlife resources by preventing loss of and damage to such resources and by providing for the development and improvement thereof in connection with the project. DOE is required to give full consideration to the recommendations of the Secretary of the Interior and the State agency. The project plan shall include such justifiable means and measures for wildlife purposes that the reporting agency finds should be

adopted to obtain maximum overall project benefits. No permit is required by this Act. However, DOE, subsequent to its consultations with FWS, will consider the mitigation of impacts to fish and wildlife resources in accordance with the FWS Mitigation Policy (DOI, 1981).

Migratory Bird Treaty Act (16 U.S.C. 703 et seq.)

The Migratory Bird Treaty Act was enacted primarily to protect birds that have common migration patterns between the United States and Canada, Mexico, Japan, and Russia. It regulates the harvest of migratory birds by specifying the mode of harvest, hunting seasons, and bag limits. The Act stipulates that it is unlawful at any time, by any means, or in any manner to "kill...any migratory bird." Thus, avian mortality attributable to SRP operations would be unlawful under the provisions of this Act. Although no permit for this project is required under the Act, DOE is required to consult with FWS regarding impacts to migratory birds, and to evaluate ways to avoid or minimize these effects in accordance with the FWS Mitigation Policy (DOI, 1981).

Anadromous Fish Conservation Act (16 U.S.C. 757a-f)

The principal purpose of the Anadromous Fish Conservation Act is to enhance the conservation and development of the anadromous fishery resources of the United States that are subject to depletion from water resource development. Its applicability to the Plant is that populations of anadromous fishes are to be sustained and their movements unobstructed by Plant operations. Although there is no permit required by this Act, DOE is required to consult with FWS regarding impacts to anadromous fishes, and to evaluate ways to avoid or minimize these effects in accordance with the FWS Mitigation Policy (DOI, 1981). When an anadromous fish is an endangered species, the National Marine Fisheries Service (U.S. Department of Commerce) would be involved through the Endangered Species Act.

Safe Drinking Water Act, as amended (42 U.S.C. 300f et seq.)

The Safe Drinking Water Act's primary objective is to protect the quality of public water supplies and all sources of drinking water. SCDHEC has primary enforcement responsibility through the State Safe Drinking Water Act of 1976, as amended (Title 44, Chapter 55 of the 1976 Code of Laws of South Carolina). SCDHEC administration and enforcement consist of construction permits, preliminary site inspections, final construction inspections, monthly sampling collections, and regular operations and maintenance inspections.

5.2 HISTORIC PRESERVATION

An archaeological survey and testing program was conducted by the Savannah River Plant Archaeological Research Program, South Carolina Institute of Archaeology and Anthropology, from May 16 through August 17, 1984, to determine the significant sites that would be affected by the implementation of cooling water alternatives for K- and C-Reactors in the Pen Branch and Four Mile Creek areas. During this survey, 65 discrete archaeological resource sites were located and 23 were considered to be significant. The only site that potentially could be affected by proposed alternatives for C-Reactor is

38BR548; however, it is one of the 42 sites considered to be not significant. The proposed cooling water alternatives for K-Reactor involve none of the sites.

The 23 sites that are considered to be archaeologically significant are potentially eligible for nomination to the National Register of Historic Places. Consultation with the South Carolina State Historic Preservation Officer (SHPO) has resulted in the opinion that the construction of alternative cooling water systems for K- and C-Reactors will have "no adverse effect" on sites eligible for inclusion in the National Register. DOE, as part of its regular monitoring program of the onsite streams, will monitor flows in Beaver Dam Creek, Four Mile Creek, and Pen Branch. If any erosion that would impact any archaeological site is found, DOE will notify the SHPO, as was requested when the no adverse impact determination was rendered (Lee, 1986).

An extensive archaeological survey was conducted by the SRP Archaeological Research Program during October and November 1985 along Beaver Dam Creek to identify significant archaeological sites that could be affected by the cooling water alternatives for the D-Area powerhouse. During this survey, no significant archaeological sites were located that would be affected by the direct-discharge alternative. One significant site was identified that fell within the general area potentially affected by the increased-flow-with-mixing alternative. However, because of its specific location, this site would not be affected by erosion or inundation from increased pumping to the raw-water basin alternative. This site has been recommended by DOE to the State Historic Preservation Officer for eligibility for nomination to the National Register of Historic Places. Neither the Advisory Council on Historic Preservation (Klima, 1986) nor the State of South Carolina Historic Preservation Officer (Lee, 1986) object to a determination of "no effect" for archaeological site 38BR450 in relation to increased flows in Beaver Dam Creek (D-Area).

5.3 SOLID WASTE DISPOSAL

The SRP Sanitary Landfill is designed and operated according to SCDHEC guidelines for receiving domestic waste from SRP construction and operational activities. The Sanitary Landfill site is being expanded to 67 acres. Solid nonhazardous wastes generated during construction of selected alternatives will be disposed of in this facility. No hazardous wastes will be generated as a result of implementing any cooling water alternative discussed in this EIS.

5.4 ENDANGERED SPECIES

The Endangered Species Act requires each Federal agency to ensure that any action it authorizes, funds, or carries out does not jeopardize endangered or threatened species (or those that are proposed as such) or result in the destruction or adverse modification of designated critical habitat. Federal agencies are required to consult with FWS and/or NMFS regarding the implementation of a proposed action. If FWS or NMFS indicates that an endangered or threatened species or critical habitat could be present in the

area of the proposed action, a biological assessment must be prepared. This assessment is used as a basis for evaluating the effects on Federally-protected species through the formal consultation process.

Formal consultations were held between DOE and FWS to comply with the Endangered Species Act of 1973. Based on these consultations, FWS issued a biological opinion that the preferred alternative cooling systems should have no effect on the American alligator, red-cockaded woodpecker, wood stork (Parker, 1986), or bald eagle (Henry, 1986). NMFS had previously concurred in DOE's determination that the population of the shortnose sturgeon in the Savannah River would not be adversely affected by SRP operations (Oravetz, 1983).

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5.5 WILDLIFE AND FISHERIES

Three regulations grant protection to wildlife and fisheries resources. These are the Fish and Wildlife Coordination Act, the Migratory Bird Treaty Act, and the Anadromous Fisheries Conservation Act. The Acts do not require application for or acquisition of a permit. However, each requires that DOE consult with FWS about impacts to fish and wildlife.

Consultations have been completed with FWS to ensure that DOE will comply fully with these three Acts. To assist in these consultations, a Habitat Evaluation Procedure (HEP) analysis was conducted which identified the value of habitat to be gained or lost with the potential implementation of the cooling water alternatives (Mackey et al., 1987).

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BD-4

5.6 WATER QUALITY

Section 402 of the Federal Water Pollution Control Act, as amended, is the basis for controlling "point source" discharges of pollutants into navigable waters of the United States through the National Pollutant Discharge Elimination System (NPDES). This system is administered by EPA, which has delegated NPDES permitting authority in South Carolina to SCDHEC.

The following sections discuss the applicable State of South Carolina water classification standards, requirements, and water quality permits associated with the implementation of alternative cooling water systems for K- and C-Reactors and the D-Area coal-fired powerhouse.

Water Classification Standards

The State of South Carolina Class B water classifications standards (Regulation 61-68) applicable to the implementation of the cooling water alternatives include the following limits on the temperature of thermal effluents:

- Section D(8)(a) - The water temperature of all Class A and Class B free flowing waters shall not be increased more than 2.8°C above natural temperature conditions or exceed a maximum of 32.2°C as a result of the discharge of heated liquids unless a different temperature standard, as provided for in Section E, has been established, a mixing

zone as provided in D(5) has been established, or a Section 316(a) determination under the Federal Water Pollution Control Act, as amended, has been completed.

- Section D(9) - The numeric standards of Section D and Section E of this regulation are applicable to any flowing waters when the flow rate is equal to or greater than the minimum 7-day average flow rate that occurs with an average frequency of once in 10 years (7Q10). Uses will be protected to the greatest extent possible, regardless of flow.
- Section D(5)(a) - Mixing zones that are used for wastewater treatment effluents shall allow safe passage of aquatic organisms, and shall allow for the protection and propagation of a balanced indigenous population of aquatic organisms in and on the water body. The mixing zone size shall be based on critical flow conditions. The mixing zone shall not be an area of wastewater treatment nor shall it interfere with or impair existing recreational uses, existing drinking water supply uses, existing industrial or agricultural uses, or existing or potential shellfish harvesting uses.

Requirements

On January 3, 1984, DOE and SCDHEC mutually agreed on a Consent Order (84-4-W) that temporarily superseded the temperature requirements of the NPDES permit and established a process for SRP thermal discharge compliance with the State of South Carolina's water classification standards. This Consent Order was modified August 27, 1985, to include an implementation schedule for the selected cooling water systems. Due to extensive comments on the draft Environmental Impact Statement for the alternative cooling water system, additional time was needed by DOE to address the comments, resulting in an August 1987 amendment to 84-4-W which provides a revised schedule. Major requirements contained in the amended Consent Order and their status are summarized below.

Comprehensive Cooling Water Study: Required by NPDES permit as Special Condition Part III, Number 8 - DOE began a 2-year Comprehensive Cooling Water Study (CCWS) with data collection during Fiscal Years 1984 and 1985 to evaluate the environmental effects of present intakes and releases of cooling water by SRP facilities. The CCWS has two primary objectives: The first objective is to quantify the environmental effects associated with the large-volume withdrawal and discharge of cooling water on the Plant. The second objective is to evaluate the significance of any environmental impacts attributed to cooling water intake and discharge.

E. I. du Pont de Nemours and Company and the Savannah River Ecology Laboratory are conducting the CCWS for DOE. Participating in the study in a review and advisory capacity are the State of South Carolina, the State of Georgia, the U.S. Environmental Protection Agency (Region IV), the U.S. Fish and Wildlife Service (Region IV), and the U.S. Army Corps of Engineers (South Atlantic Division).

An annual SRP report (Du Pont, 1985) contains historic data pertinent to the study's objectives and new data developed during fiscal year 1984. A

final report (Du Pont, 1987) documents additional data collected during fiscal year 1985 and conclusions. This EIS incorporates data from this study.

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Thermal Mitigation Study - In compliance with the Consent Order, a Thermal Mitigation Study (DOE, 1984) describing the cooling water systems that could be implemented for K- and C-Reactors and the D-Area coal-fired powerhouse was submitted to SCDHEC on October 3, 1984.

Implementation Schedule - As outlined in the amended Consent Order, plans and specifications for the selected cooling water systems, subject to the appropriation of funds by Congress, are to be submitted to SCDHEC on or before September 30, 1988. The Consent Order further provides for the start of construction of the selected cooling water systems for K-Reactor on or before February 28, 1990, with completion of the selected system for K-Reactor on or before December 31, 1992. The implementation schedule for the construction of the selected D-Area cooling water system is to be contained in a submittal of plans and specifications on or before March 31, 1988, and is to become enforceable after approval by SCDHEC. Within 2 months after completion of the cooling water systems, plans of study for successful 316(a) demonstrations are to be submitted to SCDHEC if the alternatives selected do not comply with the ΔT of 2.8°C above ambient temperature requirement.

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Permits - Before construction of the selected cooling water systems, DOE will submit the required wastewater construction permit applications to SCDHEC for its approval.

Construction of the pipeline and discharge sparging system for the D-Area direct-discharge alternative will require Section 10 and 404 permits from COE. Section 401 certification from SCDHEC will be required for this alternative to ensure that construction and operations-related discharges into navigable waters will comply with applicable water classification standards. If this alternative is selected, DOE will submit the necessary permit applications to COE for its approval and the required SCDHEC certification before construction.

DOE will submit plans of study for conducting Section 316(a) demonstration studies within 2 months after completion of the selected cooling water systems if the selected cooling water systems do not meet the delta- 2.8°C ambient temperature requirement (i.e., once-through cooling towers for K- and C-Reactors, and increased pumping to the raw water basin for the D-Area coal-fired powerhouse). The Section 316(a) demonstration studies will assess whether the thermal discharge conditions for the implemented cooling water systems will ensure the protection and propagation of a balanced indigenous population of fish and wildlife in and on the waters affected by the thermal discharge.

In addition to these permits, DOE will continue to report on a quarterly basis to the South Carolina Water Resources Commission surface- and groundwater use, including changes in surface-water withdrawals associated with the implementation of the selected cooling water systems.

5.7 FLOODPLAINS/WETLANDS

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A floodplain/wetlands assessment is presented in Appendix F. A notice of this floodplain/wetlands assessment appeared in the Federal Register on March 28, 1986 (51 FR 10654). A floodplain/wetlands determination will appear in the Federal Register after completion of this EIS.

5.8 AIR QUALITY

The authority for regulation of air emissions has been delegated by EPA to the SCDHEC Bureau of Air Quality Control. The Bureau issues construction and operating permits and performs Prevention of Significant Deterioration (PSD) reviews. Because existing facilities will supply steam and electric power for any needed construction activities, no new SCDHEC operating permits will be required for K- and C-Reactors or the D-Area powerhouse.

The implementation of cooling towers for K- and C-Reactors will not emit any air contaminants that are regulated by an air emission permit.

EPA has retained jurisdiction for the regulation of airborne radionuclides. The Plant operates within the limits of the EPA's final regulations (50 FR 5190). The cooling water alternatives discussed in this EIS will be within these limits.

5.9 DEPARTMENT OF ENERGY HEALTH AND SAFETY ORDERS

DOE is responsible for ensuring the health and safety of its own facilities and has established comprehensive health, safety, and environmental programs. DOE Orders pertaining to the construction and operation of cooling water alternatives include:

- Order 3790.1, "Occupational Safety and Health Program for Federal Employees," December 11, 1980
- Order 5440.1C, "National Environmental Policy Act," April 9, 1985
- Order 5480.1B, "Environmental Protection, Safety, and Health Program for DOE Operations," September 23, 1986
- Order 5482.1B, "Environmental, Safety, and Health Appraisal Program," September 23, 1986
- Order 5483.1A, "Occupational Safety and Health Program for a Government Owned Contractor Operated Facility," June 22, 1983
- Order 5484.1, "Environmental Protection, Safety, and Health Protection Information Reporting Requirements," February 24, 1981
- Order 5700.6B, "Quality Assurance," September 23, 1986

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- Order 6430.1, "Department of Energy General Design Criteria Manual,"
December 12, 1983
- Order 5480.6, "Safety of Department of Energy-Owned Nuclear Reactors,"
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